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DEC 27 2006

Appl. No. 10/642,367  
Atty. Docket No.: 2001B052A/2  
Amdt. dated December 27, 2006  
Response to Adv. Action of December 22, 2006

### REMARKS/ARGUMENTS

Further consideration of the subject application in light of the remarks which follow is respectfully requested.

Claims 1, 2, 4-15, 17-26, 27-39, 41-46, and 49-58 are pending. Claims 3, 16, 27, 40, and 47-48 are cancelled.

#### Claim Rejections Under 35 USC §112, first paragraph

Claims 1-46 have been rejected under 35 USC §112, first paragraph. The Office contends that Claims 1, 14, 25, and 38, amended lack support in the application as originally filed. In particular, the phrase "carbonation catalyst comprising carbonates and/or bicarbonates of quaternary ammonium bases" is alleged to lack support.

The statement has been amended to further clarify its meaning. Support for the amended phrase can be found in numbered paragraph (0018), (0019) and (0020) wherein Applicants recite:

"[i]n preparing the dialkyl carbonates and diols, an alkylene oxide is first reacted with CO<sub>2</sub> in the presence of a halogen-free carbonation catalyst (e.g., [1,1'-(1-butylbenzimidazol-2-yl)pentane]copper(II) di(trifluoromethanesulfonate), or hydroxides, carbonates or bicarbonates of quaternary ammonium bases) to provide a corresponding cyclic carbonate."

The Office further suggests that the term "catalyst" is always recited in the specification in the singular form, and therefore only a single catalyst is interpreted and not mixtures of catalysts.

Applicants respectfully disagree. Examiner's attention is directed to numbered paragraphs (0019) and (0020), wherein Applicants disclose "[p]referred catalysts are the quaternary ammonium compounds...

Examples of quaternary ammonium compounds suitable as catalysts in accordance with this invention ... and the corresponding carbonates and bicarbonates of the above enumerated compounds."

The specification is replete with the recitation of catalysts (i.e., the plural form of catalyst). Accordingly, the claims which recite catalysts are supported in the specification.

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Applicant has deleted the term "and mixtures thereof" because Applicant believes that the phrase "and mixtures thereof" has no effect on the scope of the claim. Any mixtures that contain either a carbonate, bicarbonate, or both would be covered due to the use of the preamble term "comprising" which creates an open ended claim.

#### **Double Patenting**

Claim 49 and 58 are rejected on the ground of non-stutory obviousness-type double patenting as being unpatentable over U.S. Patent No. 6,774,256 and provisionally rejected as being unpatentable over copending Application No. 10/642,367. Applicant has submitted a terminal disclaimer to overcome both rejections.

#### **Obviousness Rejection Under 35 U.S.C. §103(a)**

Claims 1, 2, 4-15, 17-26, 28-39, and 41-46 and 49-58 have been rejected as obvious over Buchanan alone, or taken in view of U.S. Patent No. 3,535,341 to Emmons et al. ("Emmons") and U.S. Patent No. 2,873,282 to McClellan ("McClellan").

Applicants recite a process comprising the steps of:

- (a) reacting... **a halogen-free carbonation catalyst selected from the group consisting of carbonates of quaternary ammonium bases and bicarbonates of quaternary ammonium bases...**; and
- (b) reacting...**said catalyst...** wherein said crude product stream exhibits a **halogen concentration of about 5 ppm or less.**

First, neither Buchanan, Emmons, nor McClellan suggests using the same halogen-free carbonation catalyst as both the carbonation catalyst and as the transesterification catalyst. Even if you accept the Office's position that you can use one of the catalysts described in Emmons or McClellan in step (a), there is nothing in any of the art that suggests that you should use that exact same catalyst as both the carbonation catalyst and the transesterification catalyst.

The Office suggests that one must look at the combination of the references as a whole. While true, the Office must still show a specific motivation to combine the references. It is not permissible to pick and choose catalysts from different portions of the prior art if there is no specific motivation or teaching to use that particular combination or use of catalysts. The Office is suggesting that you replace the carbonation catalyst in step (a) of Buchanan with a carbonation

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catalyst from another piece of art (Emmons or McClellan) and then to use the same catalyst as a transesterification catalyst in step (b) even though this specific combination is never discussed anywhere. The Office has clearly failed to show a specific motivation to use the catalyst in Emmons or McClellan as both the carbonation catalyst and the transesterification catalyst.

Second, Buchanan also fails to disclose or suggest Applicants' recited catalyst of step (b). The Office contends that by showing heterogeneous transesterification catalysts that include anion exchange resins having quaternary ammonium is equivalent to showing the **specifically claimed halogen-free hydroxides of quaternary ammonium bases**. The Office has not provided any indication, suggestion, or motivation to use halogen-free hydroxides that produce a crude product stream that has a halogen concentration of about 5 ppm or less.

As conceded by the Office, Emmons and McClellan also fail to cure the deficiencies in Buchanan. As such, neither Buchanan alone, nor Buchanan in view of Emmons and/or McClellan render Applicants' presently claimed invention obvious. The Office notes that the test for combining references is to look at the combination of disclosures taken as a whole. However, the claimed limitation must still be taught in one of the pieces of art cited. In this cases, none of the pieces of art cited provide for the claimed limitations of step (b). Applicants respectfully request removal of the rejection.

Accordingly, Applicants respectfully request reconsideration in view of the above remarks, that the rejection of the claims be removed, and that the claims, be passed to allowance.

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### CONCLUSION

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Reconsideration and allowance is respectfully requested. Applicant would also like to request that an interview prior to the issuance of a final Office Action in this case.

The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account number 05-1712. Moreover, if the deposit account contains insufficient funds, the Commissioner is hereby invited to contact Applicants' undersigned representative to arrange payment.

Respectfully submitted,

Date: 12/27/06



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